



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,830	12/29/2003	Ga-Lane Chen		7172
25859	7590	01/25/2006		
WEI TE CHUNG FOXCONN INTERNATIONAL, INC. 1650 MEMOREX DRIVE SANTA CLARA, CA 95050			EXAMINER DOWLING, WILLIAM C	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/748,830

Applicant(s)

CHEN ET AL.

Examiner

William C. Dowling

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 8-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (5,612,814) in view of Gove et al. (5,489,952).

3. Claims 1-2, 8-9, 11-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yang.

Yang discloses a DMD image projection device comprising:

a light source (10);

a micro-mirror unit (220, 250) having a plurality of deflectable micromirrors (230) switchable between on and off states where one state reaches a projection lens (80) and the other does not. The use of filter (220) of three colors allows for 8 states of projection.

Yang does not teach the direct illumination of the modulator.

Gove et al. teaches the direct illumination of a spatial light modulator (118) with light from a light source (120) which is not reflected.

It would have been obvious to one skilled in the art at the time of the invention to utilize a full color modulator system comprised of a filter and DMD in systems with direct

illumination, as taught by Gove et al. in order to avoid light losses associated with reflection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-7, 10, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang and Gove et al. as applied to claim 1 above, and further in view of Hornbeck (5,583,688)

Hornbeck (5,583,688) teaches a known structure of a DMD device including a metal oxide semiconductor layer (316), a metal layer (308), a torsion layer (304) and a silicon substrate (318) and address electrodes (314) formed on the layers. Pulse width modulation is also provided (Column 7 Line 2)

It would have been obvious to one skilled in the art to modify the optical arrangement of Yang and Gove et al. for use with any of a number of known types of deformable mirror devices such as the one shown by Hornbeck because such modification is simply the substitution of one type of reflective modulator for another within a known optical arrangement.

Response to Arguments

6. Applicant's arguments filed 11/4/05 have been fully considered but they are not persuasive.

Art Unit: 2851

Applicant's argument with respect to the enablement rejection is unpersuasive because while it admittedly is known to use color filter arrays to form multicolor light beams or color separation means to separate white light into color components such features were not described in the specification as pertaining to applicant's invention.

With respect to applicant's argument that Yang does not teach direct illumination of a reflective modulator a new rejection incorporating Gove et al. is hereby made in which direct illumination is taught. Such direct illumination clearly could have been used with a variety of modulators.

Further, the dichroic filters of Yang are deemed to be part of the reflective modulator system in that each filter element has an associated mirror element and thus each mirror element is considered a red, blue or green micromirror. It should be noted that it would have been an obvious modification to integrally form such a structure because it is well known to integrate elements in order to reduce the number of separate structures.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

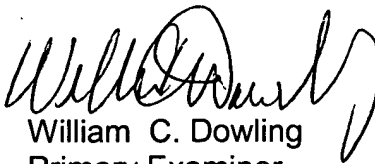
Art Unit: 2851

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Dowling whose telephone number is 571-272-2116. The examiner can normally be reached on MON-THURS.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-1750. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William C. Dowling
Primary Examiner
Art Unit 2851